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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,000	11/18/2003	Julio Burkhard Seeger Stein	4369-032092	4205

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EXAMINER
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FULLER, ERIC B

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/716,000

Applicant(s)

SEEGER STEIN, JULIO  
BURKHARD

Examiner

Eric B. Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-39 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 20-39 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

The declaration filed on January 21, 2005 under 37 CFR 1.131 has been considered but is ineffective to overcome the Holcomb reference.

The evidence submitted is insufficient to establish applicant's alleged conception, diligence, and/or actual reduction to practice of the invention occurring in this country or a NAFTA or WTO member country. A statement and evidence is required to show that the acts of conception and diligence occurred in this country or a NAFTA or WTO member.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Holcomb reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). In particular, the broadest claimed invention requires such limitations as alkaline hydroxide, certain pH conditions, and a lignocellulose material. The declaration fails to provide evidence that these critical features were conceived during the alleged conception.

The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Holcomb reference to either a constructive

reduction to practice or an actual reduction to practice. Although the declaration indicates many dates prior to March 30, 2001 in an attempt to show diligence, diligence must be shown between March 30, 2001 and the filing date of the present invention. Due diligence has not been shown for this period of time.

Because the declaration is ineffective in overcoming the Holcomb reference, the rejections of the previous Office Action are maintained.

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 20-21 and 25-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Holcomb (US 2004/0166246).

Holcomb discloses a method of impregnating wood with an aqueous solution comprising an alkali metal hydroxide and a soluble silicate and a boron compound, having a pH of at least about 10 (paragraph (00211)). While Holcomb does not specifically state that the pH permits partial neutralization and insolubilization of the salts in situ by the action of acid groups present in the wood and the acidic action of carbon dioxide in surrounding air, it is the Examiner's position that this effect must necessarily occur in the process of Holcomb since the materials and process steps of Holcomb are materially similar to those disclosed by Applicant. Any differences in properties between the claimed invention and that of Holcomb must have been caused by process variables not claimed in the instant application.

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With respect to claim 21, Holcomb discloses a pH of an exemplary composition of 10.8 in Example 1. As to claims 25-26, Holcomb discloses that impregnation preferably occurs using vacuum pressure, as described in paragraph (0019) and Example 2. In Example 2, Holcomb discloses using a liquid pressure of 150 psi, or 10.2 atm, for 30 minutes to 2 hours, or 30-120 minutes, which anticipates claim 26.

As to claims 27-28, Holcomb also discloses that the composition may alternatively be applied at ambient atmosphere (Abstract) and by spraying (paragraph (00232)).

As to claims 29-31, Holcomb discloses that the boron is added via boric acid or borax (sodium tetraborate), which will necessarily form metaborate salts in solution.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 22-24 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holcomb.

Holcomb is applied for the reasons discussed above. With respect to claim 22, Holcomb is silent with regard to the humidity level of the wood being treated. It is noted that Holcomb does not disclose that the wood used is first dried before its treatment. The wood humidity level would have varied depending upon the type of wood being treated and the form the wood is in.

As to claims 23-24, Holcomb discloses that sodium or potassium silicate may be used as the alkali metal silicate, and that the silicate is preferably present in an amount of 1-30 % by weight (paragraphs (0023q-I0024)). Overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Holcomb's silicate range that corresponds to the claimed range. In re Malagari, 184 USPQ 549 (CCPA 1974).

As to claims 32-33, Holcomb discloses an amount of boron-containing salt in the range of about 1 to about 30% by weight (paragraph (00232)). It is noted that "about 1 %" is not a limiting endpoint, and is very close to 0.7 %. It would have been obvious for one having ordinary skill in the art to have determined the optimum amount of boron-containing salt through routine experimentation depending upon the specific wood being treated and the desired qualities of the treated wood, in the absence of a showing of unexpected results.

Claims 34, 36, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holcomb as applied to claim 20 above, and further in view of Shiozawa (US 5,478,598).

Holcomb lacks a teaching of treating its impregnated wood with a solution comprising soluble alkaline earth compounds. Shiozawa discloses a step, after first impregnating wood with a composition comprising silicate and boron compounds, of further treating the impregnated wood with an aqueous solution containing alkaline earth compounds because sodium silicate in the already impregnated composition

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reacts in the presence of these compounds and becomes insoluble, closing up tiny ducts in the wood (col. 3, lines 16-25). It would have been obvious for one having ordinary skill in the art, upon reading the reference of Shiozawa in combination with Holcomb, to have performed an additional step of treating the wood with a solution containing alkaline earth compounds in order to render the silicate insoluble and to close tiny ducts in the wood.

Claims 34-35 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holcomb as applied to claim 20 above, and further in view of Crews, IV et al. (US 5,205,874).

Holcomb lacks a teaching of treating its impregnated wood with a solution comprising acids. Crews discloses a step, after first impregnating wood with a composition comprising silicate, of further treating the impregnated wood with a phosphoric acid solution to form a bi-layer of the silicate (see Abstract). It would have been obvious for one having ordinary skill in the art, upon seeing the reference of Crews, in combination with Holcomb, to have performed an additional step of treating the wood with an acid solution, such as phosphoric acid taught by Crews in order to form bi-layers which improves protective resistance to corrosion, fire and heat (col. 3).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks, can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

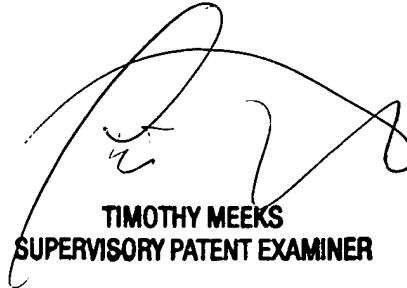
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EBF



**TIMOTHY MEES**  
**SUPERVISORY PATENT EXAMINER**